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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,798	08/25/2003	James M. Meier	F12.12-0137	2066
7590	11/19/2004			
Brian D. Kaul Westman, Champlin & Kelly Suite 1600 900 Second Avenue South Minneapolis, MN 55402-3319			EXAMINER EICKHOLT, EUGENE H	
			ART UNIT 2854	PAPER NUMBER
DATE MAILED: 11/19/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/647,798

Applicant(s)

MEIER ET AL.

Examiner

Eugene H Eickholt

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12-21, 26-29, 32, 34, 35, 40, 41 and 43-48 is/are rejected.
- 7) ☒ Claim(s) 6-11, 22-25, 30, 31, 33, 36-39, 42, 49 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12-19-03, 1-30-04, 2-23-04, 7-26-04 and 8-12-04</u>                       | 6) <input type="checkbox"/> Other: ____.                                    |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1-2, 4-5, 16-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe.

Referring to figs. 11-13, column 6, lines 11-24 indicates cassette 34 mounts shafts 86 and 88 as the supply and take-up spools. These shafts are mounted in case portions 90-92. See col. 6, lines 12-14. This reads on the spool enclosures. Between these portions is a slit 94 which reads on the gap. The ribbon is shown guided around guide ribbon end portions 153. See col. 8, lines 53-56 which reads on claim 2. Figure 13 best shows the slit 94 being forming by the interior sides walls of the case portions 90-92 which reads on claim 2. The slit is shown in figs. 11-13 to be accessible from bottom and rear sides of the case 84 (cassette 34) as called for in claim 4. The Fig. 13 view shows a wall portion which joins the interior side walls of the slit 94 as called for in claim 5. Regarding claims 16-17, figure 11 shows the claimed opening as recited in these claims. The male-female interconnection 198-198 of fig. 37 reads on claim 19.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Field et al.

Watanabe does not disclose spool rotation inhibitors. Such are common in the spool control art as shown by the inhibitors 14, 46 of Field et al. See fig. 1 and col. 2, lines 55-57 concerning the tensioning wire 14 and col. 3, lines 9-34 concerning buckle preventing spring 40. Wire 14 extends from the housing as a tab member broadly recited in claim 13 and spring 40 by virtue of tensioning the accumulating tape acts as a tab member as recited in claims 14-15.

It would have been obvious to modify the cassette of Watanabe to have the springs 14 and 40 of Field et al. Motivation is expressly set forth in Field et al as spring 14 tensions the tape leaving the supply spool 12 and spring 14 prevents and smoothes any buckle accumulations. See col. 2, lines 55-58 and col. 3, lines 9-34 teachings.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Kameyama.

Watanabe does not disclose use of a finger hold. Kameyama shows such a finger hold 9A. See col. 2, lines 10-24. It would have been obvious to provide holding parts for finger grasping with the Watanabe et al cassette. Motivation may be found in the Kameyama teaching of better control for stability. See col. 2, lines 24-25.

Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Shibata et al.

Watanabe does not disclose use of a ribbon supply circuit memory mounted to one of the spools. Shibata et al teaches placing an EEPROM 11 on the back of a circuit board 9 in turn mounted to a supply spool shaft. See col. 2, lines 63-67 and col. 3, lines 16-23. Column 4, lines 42-56 teach that the EEPROM is a supply circuit having a count

value as to the remaining ink ribbon. It would have been obvious to add the Shibata et al circuit and memory to the Watanabe supply spool shaft. Motivation is expressly set forth in Shibata et al that reliable detection of ribbon run out is possible, see col. 1, lines 33-34. If applicant intends to swear in back of the Shibata et al filing date, then such affidavit must be filed with applicant's next response or will not be entered later as being untimely.

Claims 26-27, 29 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Maruyama (Japanese 2002120446).

Figures 1-3 show a cleaning roller 17 mounted on a take up case 16a which is part of the ribbon cassette 16. The claim 27 debris-collecting surface is taught by adhering dust by the cleaning roller mentioned in the problem to be solved. Figure 3 shows the cleaning roller to be mounted in apertures in the sidewalls which reads on claim 29.

Enclosures 16a, 16c mount ribbon supply 14 and ribbon take up spools 15,. A gap is shown in figs. 1-2 through, which a thermal pinthead 6 is passed. Interior walls are shown in figs. 1-2 of the cassette on each side of the gap. A plate 2 connects these interior side walls. This reads on claim 32.

Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art cited above as applied to claim 32 above, and further in view of Field et al.

Maruyama does not disclose rotation inhibitors as called for in claims 34-35. Field et al as previously explained in the rejection of claims 12-15 teaches inhibitors 14, 46. It would have been obvious to provide the ribbons spools of Maruyama with the

Field et al rotation inhibitors. Motivation is the same as set forth in the rejection of claims 12-15.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama in view of Kameyama.

Maruyama does not disclose a finger hold.

Kameyama, as previously explained does. It would be obvious to mount the Kameyama finger holding parts on the cassette of Maruyama for the motivational reason of stability of handling previously explained.

Claim 41 is rejected under 35 U.S.C. 102(b) as being anticipated by Sakuragi.

Referring to figs. 2B-2C, the inner walls to the supply and take up housing portions 9a-9b together with front wall 9g and back wall 9h and bottom wall 2f read on the claim. Note fig. 2C shows the spool shaft 2 of the supply spool mounted through the openings in the front and rear wall.

Claims 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuragi in view of Field et al.

Sakuragi does not disclose spool rotation inhibitors. Field et al as previously explained in the rejection of claims 12-15 teaches inhibitors 14, 46. It would have been obvious to provide the Field et al rotation inhibitors 14, 46 with the Sakuragi cassette. Motivation is the same as set forth in the rejection of claims 12-15.

Claims 45-46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuragi in view of Maruyama.

Sakuragi does not disclose a cleaner roller, Maruyama et al teaches use of cleaner roller 17 mounted on take-up case 16a which is part of the ribbon cassette 16. It would have been obvious to mount such a cleaning roller on the Sakuragi cassette. Motivation would have been the desire to prevent dust from adhering to a recording paper sheet to improve quality. Note that the adhering duct by the cleaning roller reads on the claim 465 "debris collecting surface". Figure 3 of Maruyama shows the roller mounting of claim 48.

Claims 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama in view of Morgavi.

Maruyama appears to disclose a downwardly facing cassette and cleaner roller. Morgavi teaches simultaneous printing on both sides of a card. It would have been obvious to substitute the Marayama cassette for both the downwardly and upwardly facing ribbons 36, 36A of Morgavi. Such a substitution would make the lower cassette have its cleaner roller facing upwardly at the top. Motivation for such a substitution would have been the desire to ensure both sides of the card being simultaneously printed are cleaned of dust to ensure better quality printing as expressly set forth by Marayama.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art cited above as applied to claim 45 above, and further in view of Morgavi.

Neither Sakuragi or Maruyama disclose having a cleaner roller facing upwardly at the top of a ribbon cassette. Morgavi as previously explained in the rejection of claim 28 teaches perfecting printing wherein the lower printing ribbon 36A faces upwardly. It

would have been obvious to apply the cassette of Sakuragi as modified to have the cleaner roller 17 of Marayama used as the lower printing ribbon station of Morgavi which would then read on the clam 47 mounting of the cleaner roller on the top side. Motivation is as previously set forth in the rejection of claim 28.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tosa.

Ribbon cassette 10 reads on the cartridge housing of claim 1 with supply roll 13 and take-up roll 14 reading on the spools. Column 2, lines 17-23 describe a U-shaped member 3 whose legs read on the guide. The U forms a gap for a printing head. Regarding claim 3, a horizontal printing position is shown. However, if placed upright for printing, the guide legs of the U would be above and between the ribbon spools.

Claims 6-11, 22-25, 30-31, 33, 36-39, 42 and 49-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A shortened statutory period of 3 months is set to respond.

Eickholt/ds

11/08/04

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning the specifics of this communication should be directed to Examiner Eickholt, who can be reached Tuesday through Thursday. Inquiries of a general nature should be directed to the TC2800 receptionist.

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